

J.P.Morgan

PRIVATE BANK

# A World in Transition – J.P. Morgan’s Role in the Path to Net Zero

Jessica Matthews, *Global Head of Sustainable Investing, JPMorgan Private Bank*



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# Given the global sense of urgency, we see growing momentum among companies, consumers, and regulators to focus on climate solutions

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## Shifting Consumer and Employee Preferences

**8 in 10 consumers** are more likely to buy a product if it is labelled sustainable <sup>1</sup>



## Commitment in Corporate Pledges

**Two-thirds** of Fortune 500 companies have set significant climate commitments<sup>2</sup>



## Policy and Regulatory Changes

**About 78% of global GDP** is driven by key policy agreements<sup>3</sup> such as the Paris Agreement, the European Recovery Plan, and more recently the U.S. Inflation Reduction Act



## Macro Tailwinds and Return Potential

**\$4 trillion per year** needs to be invested in renewable energy up until 2030 to be able to reach net zero emissions by 2050<sup>4</sup>

<sup>1</sup> GreenPrint Survey as of March 2021.

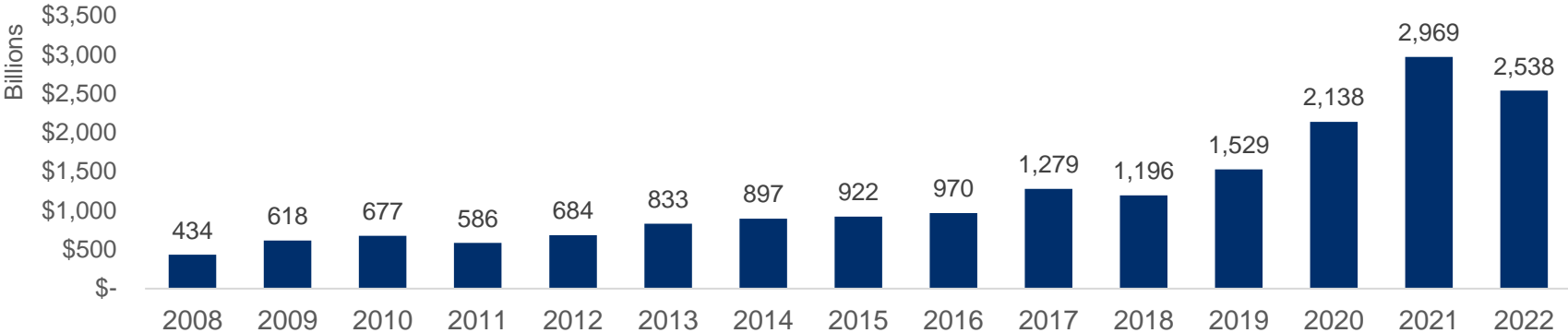
<sup>2</sup> Climate Impact Partners, "Markers of Real Climate Action in the Fortune Global 500", September 2023.

<sup>3</sup> S&P Global Market Intelligence "Path to net-zero: Stakeholders demand action on ambitions as pledges swell" December 2021.

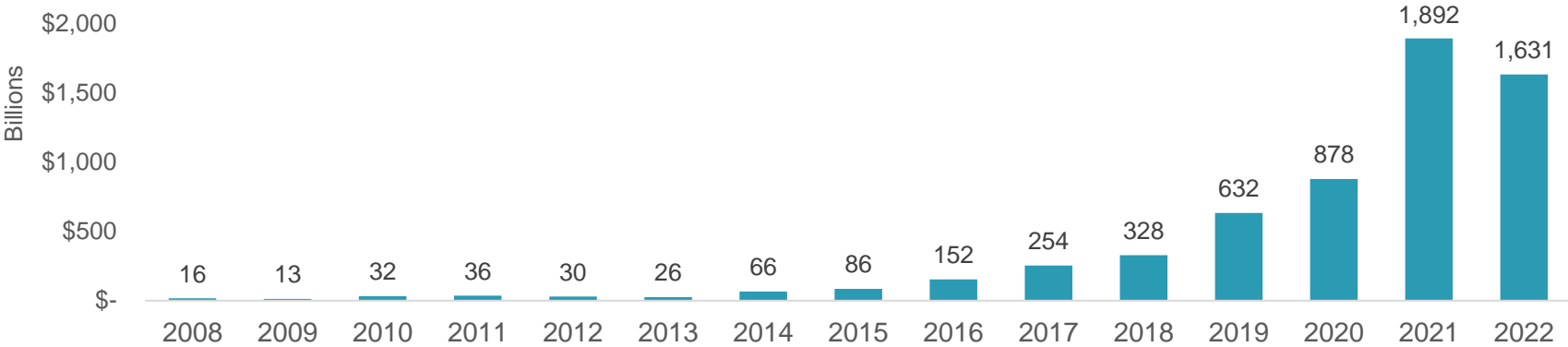
<sup>4</sup> Climate Finance Markets and Real Economy, December 2020.

# In recent years, we have seen significant growth in sustainable investment funds and ESG debt issuance

## GLOBAL SUSTAINABLE FUND UNIVERSE – ASSETS UNDER MANAGEMENT OVER TIME (\$BN)



## GLOBAL ESG DEBT – ISSUANCE OF GREEN, SOCIAL, AND SUSTAINABILITY BONDS AND LOANS (\$BN)



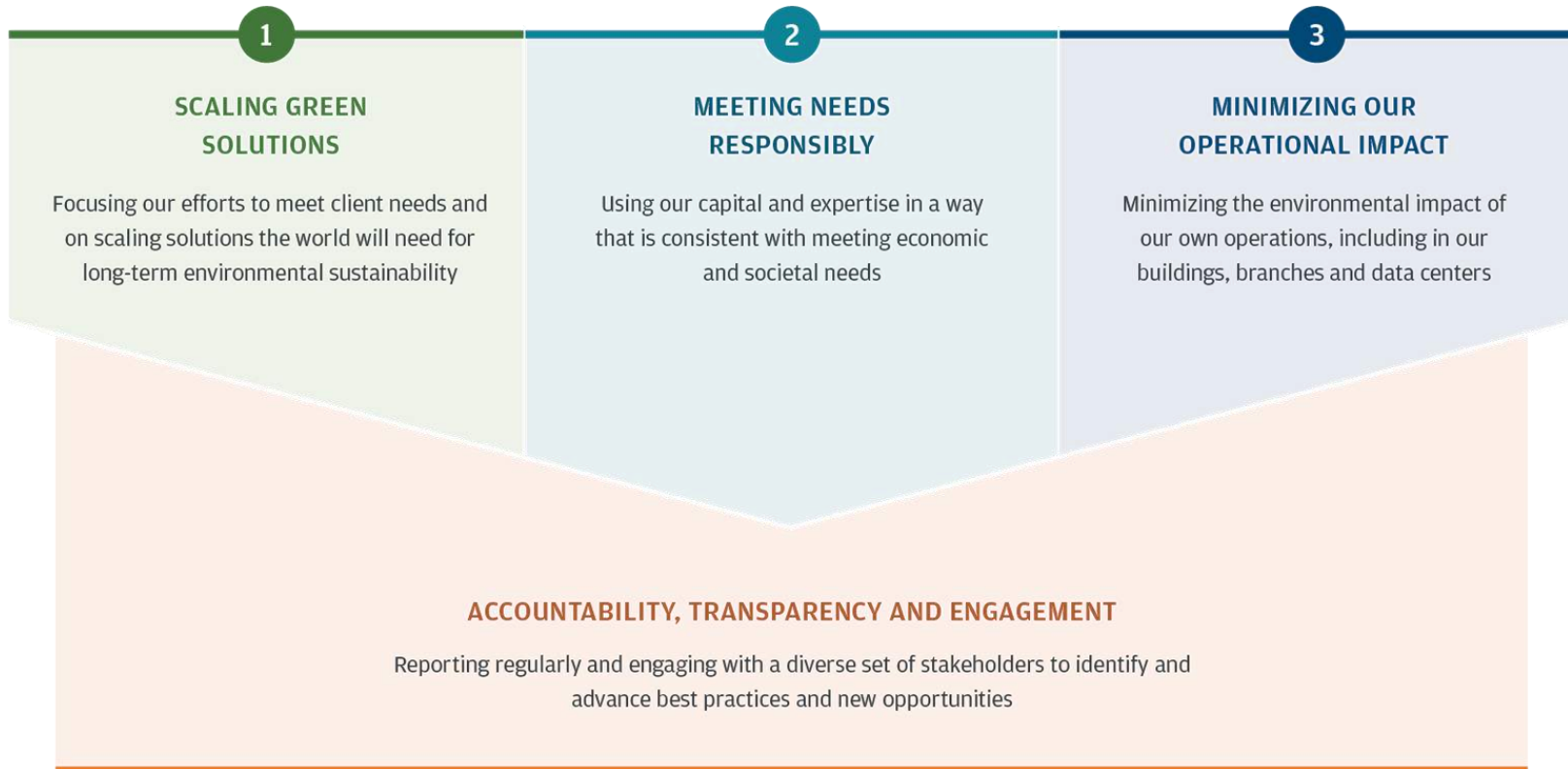
Source: Morningstar, as of October 2023. Sustainable funds identified by prospectus information. Bloomberg, as of October 2023. ESG debt identified by use of proceeds designation.

# Our approach to environmental sustainability is guided by three pillars

JPMorgan Chase helps our clients navigate the challenges and realize the economic opportunities of the transition to a low carbon economy

*Disruptions to the global energy system are again highlighting our urgent, global need to provide energy resources securely, reliably and affordably and, at the same time, address long-term clean energy solutions and strategies to reduce our carbon footprint. These objectives are not mutually exclusive. We can — and must — do both.*

**JAMIE DIMON**  
Chairman and CEO, JPMorgan Chase



# Scaling green solutions

As a global financial institution, we have an important role to play by providing financing, strategic advice and other services to clients who are working to create and implement solutions

## MOBILIZING CAPITAL FOR CLIMATE ACTION

### Developing solutions to advance the transition to a low-carbon economy will require significant capital

- In 2021, we established a \$2.5T Sustainable Development Target, which includes an aim to **finance and facilitate \$1T toward green initiatives** that support climate action by the end of 2030

## PROVIDING SUSTAINABLE SOLUTIONS TO CONSUMERS AND INVESTORS

### Our global and diversified franchise allows us to offer sustainability-focused financial options to various customers

- **Sustainable Investing:** We work with clients to build and implement sustainable investing strategies in our Asset and Wealth Management line of business

# Aiming to finance \$1T in green initiatives by 2030

Through 2022, we have financed and facilitated \$176B towards this target, helping to support climate action, clean energy, and sustainable resource management

## CASE STUDIES: SUPPORTING OUR CLIENTS IN ACTION



### *Scaling Green and Innovative Solutions*

- **Client:** Appaloosa Solar Project
- **JPMC Role:** Coordinated lead arranger
- **Size:** \$267M project finance loans<sup>1</sup>
- **Expected Outcome:**
  - Support the construction and operations of the Appaloosa Solar Project in Utah
  - Create ~250 jobs for its construction and generate meaningful property tax revenue over 35 years



### *Supporting Ecosystem Protection for Nature and People*

- **Client:** The Nature Conservancy (“TNC”)
- **JPMC Role:** Lead underwriter
- **Size:** \$350M green bond
- **Expected Outcome:**
  - Help TNC achieve its 2030 goals, including:
    - Avoiding or sequestering 3B metric tons of carbon dioxide equivalent
    - Conserving 650M hectares of healthy land

<sup>1</sup> JPMC committed \$142M to a series of syndicated project finance loans totaling \$267M

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# We work with clients to build and implement sustainable investing solutions in our Asset and Wealth Management line of business

“Sustainable investing” is an umbrella term we use to describe investment approaches that incorporate financial as well as social and environmental objectives.

To help clarify implementation options, we define four approaches that can be used alone or in concert in portfolios to help clients achieve/meet their goals.

## SUSTAINABLE INVESTING ENCOMPASSES A SPECTRUM OF APPROACHES



### VALUES-BASED INVESTING

Reflecting your values through an investment strategy that avoids or increases exposures to specific companies, sectors or business practices.



### ESG

Actively considering environmental, social and governance (ESG) factors as a key component of the implementation and portfolio construction investment decisions.



### THEMATIC INVESTING

Investing in companies that target specific social or environmental issues, such as water, clean energy and gender diversity.






### IMPACT INVESTING

Investing in companies, organizations and funds with the intention of generating positive social and/or environmental impact alongside financial return.

# There are a variety of ways for clients to invest in climate solutions

Our Private Bank Sustainable Investing team has developed a 3R framework to climate investing

3 R's	Focus Areas	How do these approaches work?	Investment Examples
 <b>REDUCE</b>	<b>Energy Supply Decarbonization</b>	<ul style="list-style-type: none"> <li>Renewable sources of energy and storage</li> </ul>	<ul style="list-style-type: none"> <li>Renewable energy generation</li> </ul>
	<b>Energy Demand Reduction</b>	<ul style="list-style-type: none"> <li>Increase efficiency of energy use</li> </ul>	<ul style="list-style-type: none"> <li>Improved engine efficiency</li> </ul>
	<b>Process Transformation</b>	<ul style="list-style-type: none"> <li>Develop alternatives to non-energy based emissions from chemistry and biology</li> </ul>	<ul style="list-style-type: none"> <li>Technology to decarbonize cement, industrials, agriculture, waste</li> </ul>
 <b>REMOVE</b>	<b>Natural Carbon Sequestration</b>	<ul style="list-style-type: none"> <li>Acceleration and enhancement of processes that naturally sequester atmospheric &amp; oceanic CO2 at-scale</li> </ul>	<ul style="list-style-type: none"> <li>Forestry, agriculture, aquaculture</li> </ul>
	<b>Mechanical Carbon Removal</b>	<ul style="list-style-type: none"> <li>Industrial processes that use mechanical means to fix and sequester carbon</li> </ul>	<ul style="list-style-type: none"> <li>Carbon removal technologies that draw carbon from the atmosphere or ocean</li> </ul>
 <b>RETROFIT</b>	<b>Water Efficiency / Enhancement</b>	<ul style="list-style-type: none"> <li>Solutions that increase fresh water supply</li> </ul>	<ul style="list-style-type: none"> <li>Water recycling and treatment</li> </ul>
	<b>Food / Agriculture Reinvention</b>	<ul style="list-style-type: none"> <li>Innovations that enable food production through climate change shocks</li> </ul>	<ul style="list-style-type: none"> <li>Agriculture technology</li> </ul>
	<b>The Built Environment</b>	<ul style="list-style-type: none"> <li>Protection of the built environment against climate extremes and change</li> </ul>	<ul style="list-style-type: none"> <li>Flood protection</li> </ul>



# Some examples: companies that are addressing urgent climate and biodiversity challenges



## What do they do?

Notpla uses brown seaweed to produce biodegradable – and edible – packaging and films, aiming to replace single-use plastics.

## What's the impact?

- In 2022, sales of Notpla products **displaced 4.4 tonnes of plastic products**, and **avoided 19 tonnes of CO2**

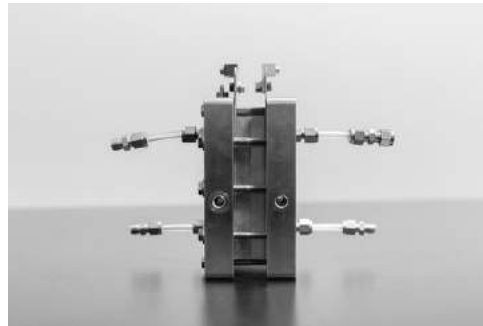


## What do they do?

Twelve uses captured CO2 emissions to \*electrochemically\* make the fuels, chemicals, and materials that are currently made by refining fossil fuels.

## What's the impact?

- Unique technology that **has the ability to eliminate up to 10% of global emissions** by transforming existing supply chains



**CampbellGlobal**  
FOREST & NATURAL RESOURCE INVESTMENTS

## What do they do?

Campbell Global (CG) is a pioneer in timberland investing, focused on acquiring high quality, mature commercial forest lands. These actively managed forests serve as natural carbon sinks and produce renewable materials, storing carbon in wood products.

## What's the impact?

- In 2022, the **net carbon retained** by CG's managed acreage was nearly **2.4 million tonnes of CO2** – equivalent to the yearly emissions of **over 530,000 passenger vehicles**



Sources: Notpla, Twelve, Campbell Global, as of August 2023.

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# Meeting needs responsibly: targeting our financed emissions

We chose to address these sectors given their contribution to total global emissions and in consideration of the technical and economic maturity of their available decarbonization pathways

## 2030 TARGETS FOR EMISSIONS INTENSITY REDUCTION BY SECTOR



### OIL AND GAS

**35**  
reduction  
**1/3**  
reduction  
%

in operational carbon intensity

in end use carbon intensity



### ELECTRIC POWER

**69**  
reduction  
%

in carbon intensity, focused on electric power generation



### AUTO MANUFACTURING

**41**  
reduction  
%

in carbon intensity, focused on the manufacturing of new vehicles and tailpipe emissions from such vehicles



### IRON AND STEEL

**31**  
reduction  
%

in carbon intensity, focused on crude steel production



### CEMENT

**29**  
reduction  
%

in carbon intensity, focused on cement manufacturing



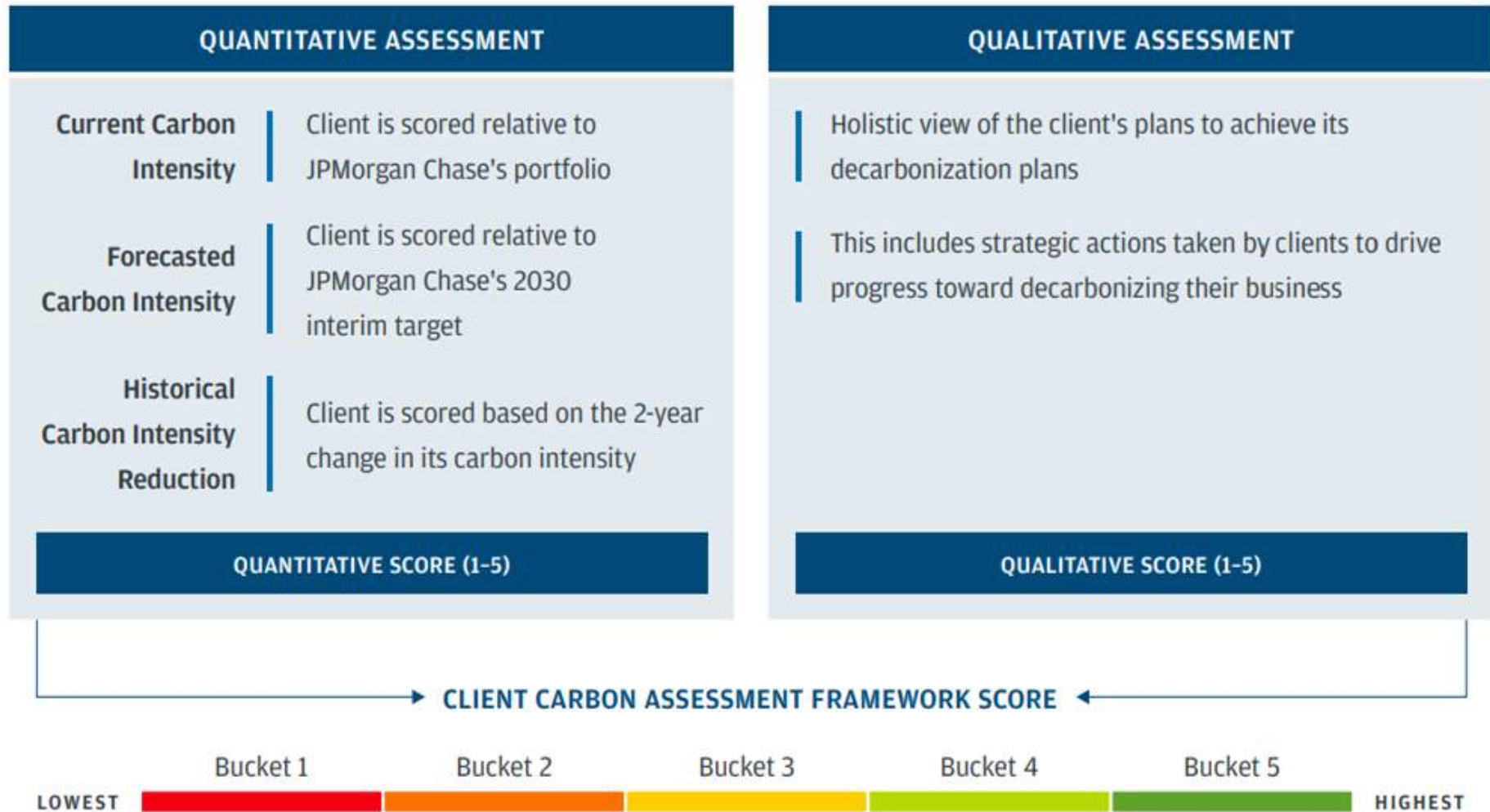
### AVIATION

**36**  
reduction  
%

in carbon intensity, focused on revenue-generating passenger service and belly freight operations of airline companies

<sup>1</sup> Measured in g CO<sub>2</sub>e/MJ and g CO<sub>2</sub>/MJ using a 2019 baseline for operational and end use carbon intensity, respectively; <sup>2</sup> Measured in kg CO<sub>2</sub>/MWh using a 2019 baseline; <sup>3</sup> Measured in g CO<sub>2</sub>e/km using a 2019 baseline; <sup>4</sup> Measured in t CO<sub>2</sub>e/t crude steel using a 2020 baseline; <sup>5</sup> Measured in kg CO<sub>2</sub>e/t cementitious product using a 2020 baseline; <sup>6</sup> Measured in g CO<sub>2</sub>/RTK using a 2021 baseline


# Our Carbon Assessment Framework helps assess how in-scope transactions may affect progress toward our portfolio-level targets



# Minimizing our operational impact: 2022 progress on our targets

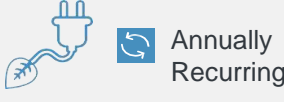
A key component of our approach to sustainability is managing our GHG footprint by reducing our direct and indirect emissions, which stem primarily from the operation of our more than 6,000 offices

**✓ Maintain carbon-neutral operations<sup>1</sup>**



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**✓ Source renewable energy for 100% of our global power needs**



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**✓ Divert 100% of e-waste from landfills**

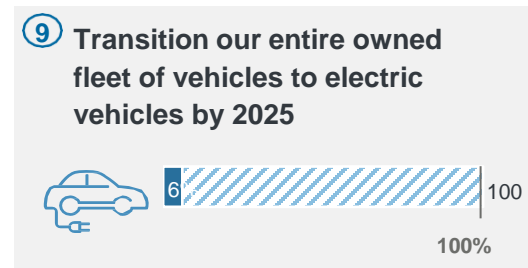
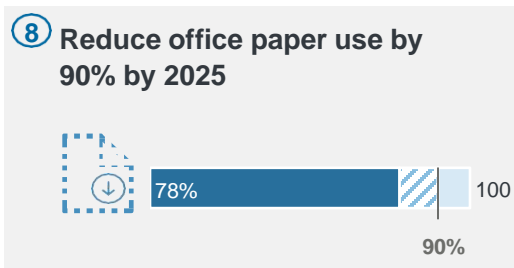
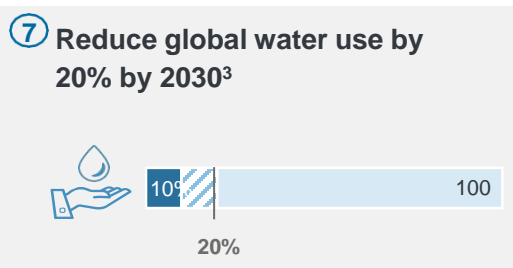
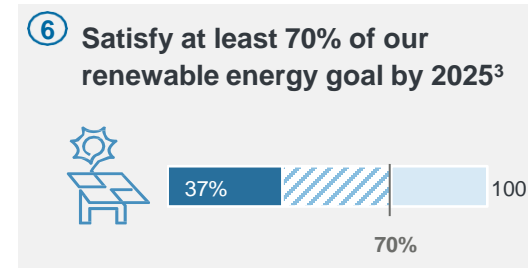
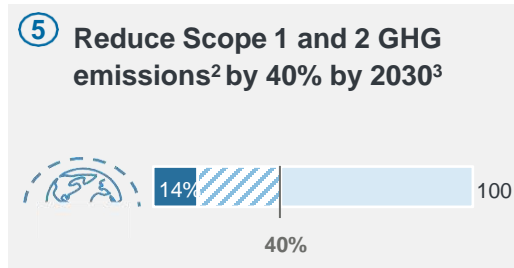


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**✓ Public target achieved**

<sup>1</sup>Using EACs and carbon credits to help us achieve neutrality; in 2021 we purchased 1,584,337 EACs & 129,527 carbon credits

<sup>2</sup>Scope 1 (direct) GHG emissions from building operations and company-owned aircraft and vehicles, and Scope 2 (indirect) GHG emissions from purchased electricity

<sup>3</sup>With on-site renewable energy and off-site long-term renewable energy contracts

# Carbon markets are an important consideration for decarbonization



**Carbon market size:** The market is estimated to increase fifty-fold to \$546B in 2050 according to BloombergNEF. Today the voluntary carbon market is on track for an annual market value record of \$1B+<sup>1</sup>.



**Carbon demand:** Carbon demand has grown and is projected to continue growing out to 2050.



**Carbon offset issuance and retirements:** Voluntary carbon retirements are on the rise with greater corporate action, having doubled between 2015 and 2022<sup>2</sup>.



**Standardization:** Various multinational initiatives are developing standardized guidelines for both buyers and sellers of carbon offsets.



**Technological removal offsets<sup>3</sup>:** Tech-based offsets have been topical as investment in the technology and scaling the technology increases, nature-based offsets are supply constrained, energy security concerns arise, and government subsidies expand.

<sup>1</sup>BloombergNEF, as of May 2022. Ecosystem Marketplace Press Release, as of September 2021; <sup>2</sup>Includes all non-Air Resource Board offsets retired in American Carbon Registry, Climate Action Reserve, Gold Standard, and Verra registries, as of January 2023.; <sup>3</sup>Includes direct air capture (DAC) and carbon sequestration and storage (CCS)

# In May 2023, JPMorgan Chase announced long-term agreements to purchase over \$200 million in high-quality carbon dioxide removal

These agreements intend to remove and store 800,000 metric tons of carbon dioxide equivalent (mtCO<sub>2</sub>e) from the atmosphere and will support scaling up emerging carbon dioxide removal (CDR) technologies



**Signed one of the largest CDR agreements ever announced with CO280 Solutions, Inc.**



**\$75 million commitment to Frontier to help accelerate CDR technologies by guaranteeing demand**



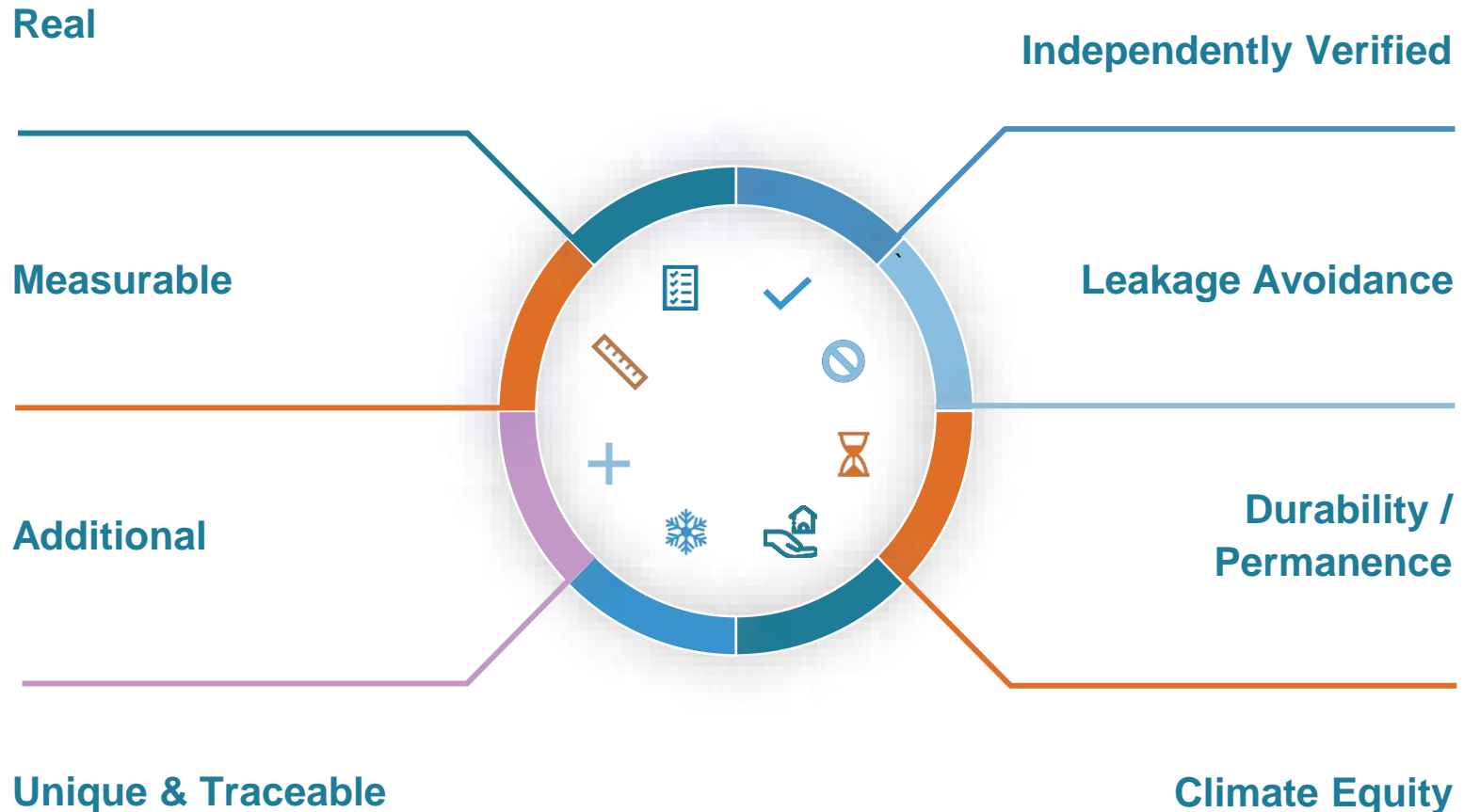
**One of the largest ever purchases of CDR via direct air capture and storage from Climeworks**



**Significant purchase of bio-oil CDR from Charm Industrial**

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# JPMorgan Chase has defined a set of core principles that guide the firm's engagement with the voluntary carbon market



Note: these principles and supplemental considerations are provided for informational purposes only, based on certain assumptions, and subject to uncertainties. We make no guarantee and provide no assurance that the carbon credits we or our clients buy, sell, trade or otherwise transact in, whether in the past or in the future, adhere to or follow any or all of these principles and considerations, in whole or in part

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